CLAIMS

1. A method for examination of nonuniformity defects of patterns comprises emitting light to an examination object whose surface is provided with a repeating pattern in which unit patterns are arrayed in a regular fashion, photodetecting transmitted light or reflected light from the examination object, and observing the detected photodetection data to detect nonuniformity defects that have occurred in said repeating pattern, wherein

the method for examination of nonuniformity defects of patterns further comprises selecting and extracting light of one or a plurality of desired wavelength bands from light of a plurality of wavelength bands, and detecting nonuniformity defects of said repeating pattern by using the light of the selected and extracted wavelength bands.

2. The method for examination of nonuniformity defects of patterns according to claim 1, wherein the light of the desired wavelength band to be selected and extracted is light of a wavelength band in which the type of nonuniformity defects that require examination can be detected with high sensitivity.

3. The nonuniformity defect examination method according to claim 1 or 2, wherein said examination object is an image device or a photomask for manufacturing the image device.

4. A device for examination of nonuniformity defects of patterns having a light source for emitting light to an examination object whose surface is provided with a repeating

pattern in which unit patterns are arrayed in a regular fashion, and a photodetector for photodetecting transmitted light or reflected light from said examination object and converting the light into photodetection data, so that the photodetection data is observed to detect nonuniformity defects that have occurred in said repeating pattern, wherein

the device for examination of nonuniformity defects of patterns further has selection and extraction means for selecting and extracting light of one or a plurality of desired wavelength bands from the light of a plurality of wavelength bands, so that nonuniformity defects of said repeating pattern are detected using the light of the selected and extracted wavelength bands.

5. The device for examination of nonuniformity defects of patterns according to claim 4, wherein the light of the desired wavelength band that said selection and extraction means selects and extracts is light of a wavelength band in which the type of nonuniformity defects that require examination can be detected with high sensitivity.

6. The device for examination of nonuniformity defects of patterns according to claim 4 or 5, wherein said selection and extraction means is a wavelength filter for selecting, extracting, and directing to the examination object the light of a desired wavelength band from light emitted from a light source.

7. The device for examination of nonuniformity defects of patterns according to claim 4 or 5, wherein said selection and

extraction means is a wavelength filter for selecting, extracting, and directing to the photodetector the light of a desired wavelength band from light directed from an examination object.

8. The device for examination of nonuniformity defects of patterns according to claim 4 or 5, wherein said selection and extraction means is an analysis device for analyzing photodetection data that has been converted in a photodetector, and selecting and extracting photodetection data related to the light of a desired wavelength band from the photodetection data.

9. The device for examination of nonuniformity defects of patterns according to claim 4 or 5, wherein said selection and extraction means is provided with a plurality of monochromatic light sources for individually emitting light of a desired wavelength band selected from the light of a plurality of wavelength bands, and is configured to allow the light emission operation of the monochromatic light sources to be switched.

10. The device for examination of nonuniformity defects of patterns according to claims 4 to 9, wherein said examination object is an image device, or a photomask for manufacturing the image device.